AUTOMATIC FOCUSING OF AN IMAGING SYSTEM

ABSTRACT OF THE INVENTION

A method of automatically focusing an imaging system and an imaging system having automatic focusing use an image of an object created by the imaging system to determine an optimum focus position. The present invention employs one or both of an edge detection approach and an image comparison approach to automatic focusing. The edge detection approach comprises computing an edge density for each image of a set of images of the object, and using a focus position corresponding to an image of the set that has a greatest computed edge density as the optimum focus position. The image comparison approach comprises adjusting a focus position for the image of the object by a difference between focus positions for a reference image and a closely matched image of a typical object. The imaging system has a computer program comprising instructions that implement the method of the invention.